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MUSIC AS CURE UNDER SCIENTIFIC TEST
Edison Idea May Be Proved by 200,000 Mood Charts

Already More Than 11,000 Have Been Gathered for Examination by Psychologists and Physicians, Yale's Recent Contribution Revealing Interesting Data and Plan for Its Utilization

*"Music hath charms to soothe the savage breast,
To soften rocks or bend a knotted oak."*

WRITTEN by William Congreve in "The Mourning Bride" more than two centuries ago, this familiar quotation is about to be proved practically. Music as a therapeutic agent long has been the dream of that school of medicine that did not wholly believe in its own remedies. It has been tried with success in the treatment of the insane, especially in Chicago, and has been recognized generally by neurologists as having a distinct value in certain cases.

But until now no really comprehensive effort has been made to find just how valuable music may be in the treatment of disease. To this end a nationwide experiment is going on that holds promise of remarkable results. "Mood charts" to the number of 200,000 are being gathered for analysis by psychologists and physicians and already 11,000 such have been assembled, the last batch having been obtained by Yale University.

What these charts show and what has been accomplished so far in this revolutionary medical movement are told in the article presented today to readers of THE NEW YORK HERALD.

By WILLIS STEELL.

DO you feel like putting peonies in your hair and starting to dance when you hear the ukelele? And when the triumphant strain rises in the opera "Aida" do you mentally don the ermine and circlet of royalty? If you are to this degree impressionable to music then you are a fine example for a mood change chart.

This chart is intended as an analysis of mental reactions to music. It is being experimented with in hospitals, at various psychological laboratories and on selected students at our great universities. Recently a test of this kind, a mood change test, was given by the students of the psychology department of Yale University, under direction of Dr. H. W. Rogers and Dr. J. E. Anderson, who arranged it to assist Thomas A. Edison in his musical research work. The charts, as filled up by the students with notes showing the reactions on their moods were then sent to the Music Research Department of the Edison Laboratories at West Orange, N. J., and the combined showings of hundreds, yes thousands, of such cards will be laid before the American Academy of Sciences.

Seeking Possibilities of Music As Remedy for Human Maladies

For the experiments are not undertaken for curiosity or any light motive, but to prove, if possible, a theory often advanced and fairly well credited, that as certain kinds of music produce certain reactions, music may be useful in treating human maladies.

The mood change chart distributed among thirty Yale students provided them opportunity to register their moods before and after they listened to music. As the programme appended shows, it comprehended several varieties of sweet sounds, sad, soothing, exciting, vivacious and majestic. The reactions varied considerably, it was said, some of the students being rendered sad by the vivacious strain, while others were fatigued by Verdi's celebrated march. This was what was expected and wanted, for variety is the spice of psychology.

Professor Bingham of the Carnegie "Tech" devised the test card. Each student who received it was asked to put down his mood at the moment, whether serious or gay, worried or care free, depressed or exhilarated, nervous or composed, fatigued or fresh, sad or joyful and discouraged or optimistic. Each man was to confess what kind of music he liked to hear, the following rather complete list being offered for him to choose: tender, vivacious, majestic, joyous, weird, martial, soothing, exciting, gay, sad, simple, dreamy.

This preliminary mood having been established, the time of day of the test was noted, morning, afternoon or evening, and so was the weather as being cold or warm, dull or bright, with the idea that these things are factors in manufacturing the variegated moods of our mere human nature. This done, all was ready for the

programme of music, from listening to which deductions were to be drawn.

This was the programme performed for the Yale students, and it will be seen that it did not draw too largely on their musical knowledge:

Triumphal March ("Aida").....Verdi
Soder's Band.
Cavatina (Raff).....Violin
Albert Spalding.

"Sally" (Kern)
Raderman's Orchestra.
"Perfect Day" (Bond).....Soprano
Anna Case.
Medley of American Patriotic Airs,
New York Military Band.

When the "Aida" march struck up the students, with one exception, showed in their manner a change of mood wrought by brass, wood and drums. Those who had marked themselves as "composed" and "depressed" were sufficiently affected to set down their reactions as being "excited." The exception was the youth who refused a programme because, he said, he was familiar with every piece of music that has been written.

"Ah," he remarked as the Verdi music was played, "Poet and Peasant" again; I've heard it too many times to be moved by it," so he jotted down "unchanged" in the space left for the delineation of his mood.

Other test cases who have begun by being "fatigued" admitted that this well known march of victory left them "exhilarated."

Test With Soothing Selections Puts One Subject to Sleep

The second selection, Raff's "Cavatina," a violin record of Albert Spalding, divided its effects between the adjectives "peaceful" and "soothing." One student, who had admitted that he was tired when he began, closed his eyes when the solo started and before it closed emitted a gentle snore. "Perfect Day," sung by Anna Case, worked the most uniform reaction, nearly all students recording their mental attitude at its close as "great peace." A youth who had started as "depressed" took a more conservative view of its effect and marked himself as "composed."

"Sally," which preceded this record of Miss Case's voice, and a medley of American popular airs which followed it shared between them the ordinary reaction of jazz. Reactions to both varied widely, certain students putting themselves down as "gay," "joyous" or "excited." The sleeping beauty woke up in time to mark "sad" after these selections, and the young man who knows music so well wrote after "Sally," "Old English melody; left me dreamy."

The interest taken in the test cases was not simulated and the students for the most part were sorry that the programme was so short. Shouts of laughter sounded when they compared notes and appreciated how various were the reactions to the same thing. Between selections Dr. Rogers made a few remarks, not always of a serious nature. The day may come, said he, when dreamy waltz music is used to coun-

teract the pains of pleurisy or the restlessness of a fever stricken patient be soothed by a dose of jazz. A symphony on the fiddle may drive away a headache and a martial strain defeat a cold. Reactions of this kind are, however, to be sought in hospitals.

More seriously he said:
"All such data is valuable in psychology, depending, however, upon accuracy in observation. Even when the reactions from music are correctly noted, other factors may be playing on the listener's emotions at the same time and it may be difficult to detach the actual effect of music from these."

"For instance, memory is called into play when familiar strains are heard. It is possible that the chief reaction by hearing Verdi's march on a listener may be that of recollection of the circumstances and the company in which he heard it first. Such being the case, and this will be admitted to be a possible case, the principal reaction would not be due to music. Or, to put it differently, the same kind of effect might be produced by any cause which starts memory into action."

"Do you consider, then, that a scientific result has been gained by this experiment?"

One Student Asserts Music Means Nothing at All to Him

Dr. Rogers preferred to be non-committal, saying that the mass of test cases collected all over the country, in other colleges, in hospitals and among groups of people assembled for the purpose, might bring out reliable psychologic data.

The students expressed different ideas about their reactions when the test cards had been filled in and passed over. One said that he had put down whatever adjective occurred to him without being able to decide whether it described his mood or not.

"So far as I am concerned, and a large class like me, music reactions are 'bunk,' I mean by that a piece of music means

nothing to me and never did. I hear men say that music tells them a story, shows them a landscape or records emotions. I go to concerts and read without comprehending, and certainly without following them in the music, a synopsis of things the composer intended. They don't get to me."

"As a matter of fact, in my own case I don't react to music and I believe there are lots of persons who do not. Now, if they would let me follow a relay race, where now one college and now another was ahead, I would react promptly enough and my reactions would mean something psychologically."

"I imagine that the music tests would be made more scientific if the cards were marked by persons who knew something about music and cared deeply for it."

But this is contrary to the scheme of the music research people. What they want is the reaction of intelligent persons, whether musically conscious or not, who will faithfully register their moods before and after they have listened to music. Under this definition the Yale group was perfectly satisfactory to them and the test cards were of value.

Little difficulty was experienced in getting intelligent answers to the mood change chart except in questions No. 6 and No. 7. The first part of No. 6, which asked, "As a result of the test, what were your noticeable mood changes?" could be answered promptly by all, but when they were required to set down the recreation causing a change in mood several of the students found the task difficult.

And several of them left blank the space they were supposed to fill in after No. 7: "Please comment on manner in which mood changes occurred." They might be conscious of a change of mood after sufficient self-questioning, but they were not able to tell how or why the changes occurred.

In order to provide against any blanks being left after the questions, the students

were given leaflets of instructions before they began. These read:

"Please bear in mind that no supernatural thing is to be expected.

"Start in to think about yourself and how you feel. In deciding how you feel, do not exaggerate.

"As you listen to the music try to forget that you are making a test. Don't strain for a desired mental effect. For example, if you are nervous, don't try to use your will power to bring about composure. Wait until the music has produced composure of your mind.

"If you have more than one mood change—for example, worried to carefree, nervous to composed, sad to joyful—indicate, in each case, which recreation produced the change. It is, of course, quite possible that the same might produce all three changes.

"It is important to know how many recreations you heard before the mood change or mood changes occurred, and whether, in your opinion, the recreation to which you were listening when the change occurred would have produced such change if it had been the first recreation to which you listened."

Vast Number of Mood Charts Already Have Been Collected

It should be stated that all the charts made by the Yale students were to be added to the charts obtained from other persons in the vicinity in order to apply a geographical classification when the final one is made. The experiment is said to be worldwide.

At the Edison laboratories in West Orange there is to be seen already a box as big as a steamer trunk which is full of mood test charts collected from all classes of people in various parts of the United States and Canada. But, great as

the number is, only a beginning has been made to collect them.

The idea of research work to determine the effects of music on humanity originated, at least in its latest form, with Mr. Edison himself, but the data gained so far has long since outgrown his ability to keep track of it without interference with other projects as interesting and likely to be as valuable, in his opinion.

Therefore, he has turned over to William Maxwell, who is at the head of the commercial department of the laboratories, the incidental work of gathering the charts from all tests, arranging them geographically and, in a word, keeping a general supervision of the matter. The real work of classifying the data will not be done by him or his assistants, but by a group of psychologists, who have been instrumental in fostering the work of research and giving it scientific importance.

Mr. Maxwell said that the actual tests started in the making about two months ago, but the Edison force had been preparing for it for more than a year. It is supposed to cover the entire country and Canada by testing in small groups all grades of society and as many different kinds of people in each group as possible. He explained:

"Dr. Bingham, director of Applied Psychology of the Carnegie Institute of Technology, devised the mood test card which we use. He was assisted in making it by Professor Charles H. Farnsworth of Columbia University and several other well known psychologists.

"Thus we did not make the chart, nor are we responsible for selections of musical pieces on the programmes by which reactions are sought. Mr. Edison is sympathetic with those who hope to find that music possesses curative qualities in certain kinds of sickness, but this is a derivative of the plan from which he holds strictly aloof. He distinctly refuses to be classed among the quacks who prescribe this and that for suffering people, whether they suffer neurotically or from any cause. Our interest in the widespread investigation being made by these charts is truly scientific.

Curative Phase of Music Will Be Left to Physicians

"We don't deny that the result so many persons hope for, apparently, which is that music will be found to be curative, interests us, but it must be left to physicians as their province.

"To-day we have in stock, so to speak, 11,000 mood change charts. By the first of September or thereabouts we expect to have on file here at least 200,000 such charts. They are coming in numerously every day and the tests are constantly being made and will be made throughout the summer. It is rather premature, therefore, to speak of these charts now while we are waiting for the bulk of them to be made and sent to us.

"And, in fact, no real analysis has been made yet on those we have received. They have been glanced over only cursorily and the most that will be done with them here will be to separate them into geographical divisions. That is, the charts made in this country will be separated into charts from the Southern States, Northern States, middle Western States, etc. When this is done it will be possible to tell whether the reactions to music on Southern folk differ from the reactions of Northern people. Interesting as this investigation may turn out to be, it will not amount to much as an analysis.

"The actual work of classification will be done by Dr. Bingham, Professor Farnsworth and the group of psychologists appointed from Columbia and the Carnegie Tech, assisted by Dr. Esther L. Gatewood.

"Enough information has been gained to show that music produces certain reactions on every normal person and that these differ with the individual and according to the kind of music he hears. As tastes of people differ in other things, so do they in music, but this much was discounted in advance. It is the difference in reactions that perhaps will tell the story.

"We are seeking knowledge. We do not

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